Another inefficiency of the system of Figure 1 is the use of PCI bandwidth by the video decoder when transmitting the data to the video memory. The video decoder is capable of performing the data transfer, and does not require system processor intervention. However, the system processor can be stalled if it needs to access the PCI bus during a transfer of video data by the video decoder. Therefore, the bandwidth used by the video decoder can prevent a system processor, or any other peripheral requiring the PCI bus, from functioning optimally when unable to access the PCI bus. For example, for a 320-by-240 pixel screen the number of bytes of data that need to be transferred each second between the video decoder and the video memory would be at least 320 x 240 x 2 bytes x 60 frames per second.

A1 cont.

In the "Detailed Description of the Drawings" section, please amend the paragraphs beginning on page 4 at line 4 to read as follows:

The portion 300 may include discrete add-on cards in a general purpose computer, components integrated on a mother board, such as Application Specific Integrated circuits (ASICs) or data processors. This bus 340 may be any number of connectors, including ribbon cable connecting two separate add-on boards, a bus integrated onto a mother board, or connector pins associated with a bus where the video decoder actually plugs into the graphics adapter 340.

A2

In operation, a video-in signal is received at the video decoder 310. The video-in signal can be representative of any number of video signals. For example, the video-in could be a compressed video signal such as an MPEG video signal, a DVD video signal, a video signal from a VCR, a television, or any other video source. The video decoder 310 converts the video-in to a video source signal usable by the graphics adapter 320. Once the video-in conversion process is completed by the decoder 310, the video source is transmitted across the dedicated local bus 340 to the graphics adapter 320. In other embodiments, the dedicated video bus 340 could be connected to other peripheral boards as well. However, in accordance with this specific embodiment, video data will not be transmitted across the system bus 350. The data transmitted across the bus 340 is captured into the video memory 322 by the graphics adapter 320. Once captured at the video memory 322, it is possible to retrieve the data from the video memory 322 and display it visually onto the monitor 324.

In the "Detailed Description of the Drawings" section, please amend the paragraph beginning on page 5 at line 11 as follows:

If the application window is moved to a different monitor, or a portion of the window is moved to a different monitor, such as monitor 334 associated with graphics adapter 330, the following sequence of events will occur. The operating system, in response to the user's inputs, would transmit operating system commands indicating the new window location. These operating system commands are interpreted by the graphics adapters 320 and 330 at memory 322. In response, the graphics adapter 330 will recognize that a portion of its video memory is to be displayed. However, all of the video data to be displayed is still being received and stored by the graphics adapter 320. Therefore, it is necessary for graphics adapter 320 to recognize the application window previously being displayed exclusively on monitor 324 is now at least partially being displayed on monitor 334. In response, the graphics adapter 320 will determine that portion of it video memory 322 that is now to be displayed by the adapter 330. This portion of the memory 322 will be sent to the adapter 330 using a transfer technique, such as a DMA transfer. DMA hardware capable of transmitting the video to the appropriate video memory location in video memory 332 can be located on VGA 320.

A3

In the "Detailed Description of the Drawings" section, on page 8 beginning at line 4, please amend the following paragraphs to read as follows:

The I/O adapter is further connected to disk drives 447, printers 445, removable storage devices 446, and tape units (not shown) via bus 402. Other storage devices may also be interface to the bus 412 through the I/O adapter 422.

A4

A communication adapter 424 is connected to bridge 450 and/or modem 451. Furthermore, a video/graphic controller 426S connects the system bus 402 to a display device 460.

A5

On page ~~8~~ 9, beginning at line ~~8~~ 14, please amend the following paragraphs to read as follows:

In operation, the bus 402 could correspond to the PCI bus 350 of FIG. 3, and the video graphics adapters would be connected to bus 402 in the same manner as controller 426. In addition, methods associated with the present invention, if any, may be implemented and stored

A6

on computer readable media such as one or more of the storage devices 445, 446, and 447 for subsequent processing by CPU 410. Since the apparatus implementing the present invention is, for the most part, composed of electronic components and circuits known to those skilled in the art, circuit details will not be explained in any greater extent than that considered necessary as illustrated above, for the understanding and appreciation of the underlying concepts of the present invention and in order not to obfuscate or distract from the teachings of the present invention.

A6 CONT.

One method of recognizing the video decoder 310 on remote bus 340 is put forth in Patent Application having attorney docket number 9900300, entitled "Method and Apparatus for Configuring a Computer System, filed on March 19, 1999, and having Application Number 09/272,464, owned by instant Assignee and is hereby incorporated by reference.

A7

Next, in step 511, an application start-up occurs. In a specific embodiment, the application is an active video application whereby an active video signal is received and displayed within a window opened by, or for, the application. For example, if a user chooses to watch a television program on a computer screen, an application capable of displaying such a television program would be executed.

On page 10, beginning on line 7, please amend the following paragraph to read as follows:

Once the first video system recognizes that a portion of the window has moved to a monitor controlled by a different video controller, it will send the captured video to the second VGA. Generally, this would be accomplished across the system bus, such as the PCI bus. This is done generally by a direct memory access (DMA) type device that is controlled by the adapter that monitors systems calls, and is aware of the new location in the other adapter where to map the captured data. One of ordinary skill in the art will recognize that in other implementations, instead of having a DMA sending the captured data to the second video graphics adapters memory, it would be possible to intercept the data before it is stored in the first VGA's memory, thereby keeping just one copy at the location needed (the second VGA).

A8